

A New Genus and A New Species of Autognetidae (Acari, Oribatida) from South Japan

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Abstract *Triautogneta higoensis* gen. n., sp. n. was collected from Kumamoto Pref., southern Japan. The new species has two incisions of rostrum, long lamellar ridges, and distinct vertical ridges on interlamellar region and anterior half of hysterosoma.

Key words: Autognetidae, New genus, New species, Oribatida, South Japan

Twenty-two species of six genera have been known as members of the family Autognetidae, according to Subías (2004). Rostrum of all members is round or has incision. The present specimens have two incisions on rostrum. On the basis of rostral and other important characters, these specimens should be treated as a new member of a new genus. As far as the author knows, two species, *Autogneta masahitoi* Aoki, 1963 and *A. japonica* Fujikawa, 1972 have been recorded from Japan (Fujikawa *et al.*, 1993). *A. masahitoi* with two incisions on rostrum should be transferred to the new genus.

Triautogneta gen. n.

[Japanese name: Mitsusenrodani]

Diagnosis: Family Autognetidae Grandjean, 1960. Rostrum with two incisions. Lamellar costulae narrow, long, more or less parallel, extending near to the insertions of rostral setae, placed mediad, near each other. Interlamellar region and anterior part of notogaster with a pair of costulae or cristae, respectively. Sensilli with dilated head. Notogaster oval in form, bearing ten pairs of setae. Genito-anal setae, 5-1-2-3, epimeral setae, 3-1-3-3, pedipalal setae, 0-2-1-3-9. Diathric subcapitulum bearing 3 pairs of setae, *a*, *m*, *h*. All legs monodactyle. Solenidiotaxy: I (1-2-2); II (1-1-2); III (1-1-0); IV (0-1-0).

Type species: *Triautogneta higoensis* sp. n.

Etymology: After the form of rostrum, with three projections.

Remarks: Two incisions of rostrum, long lamellar costulae and dilated sensilli distinguish the new genus from

all the known genera in the family.

Triautogneta higoensis n. sp.

[Japanese name: Higo-mitsusenrodani]

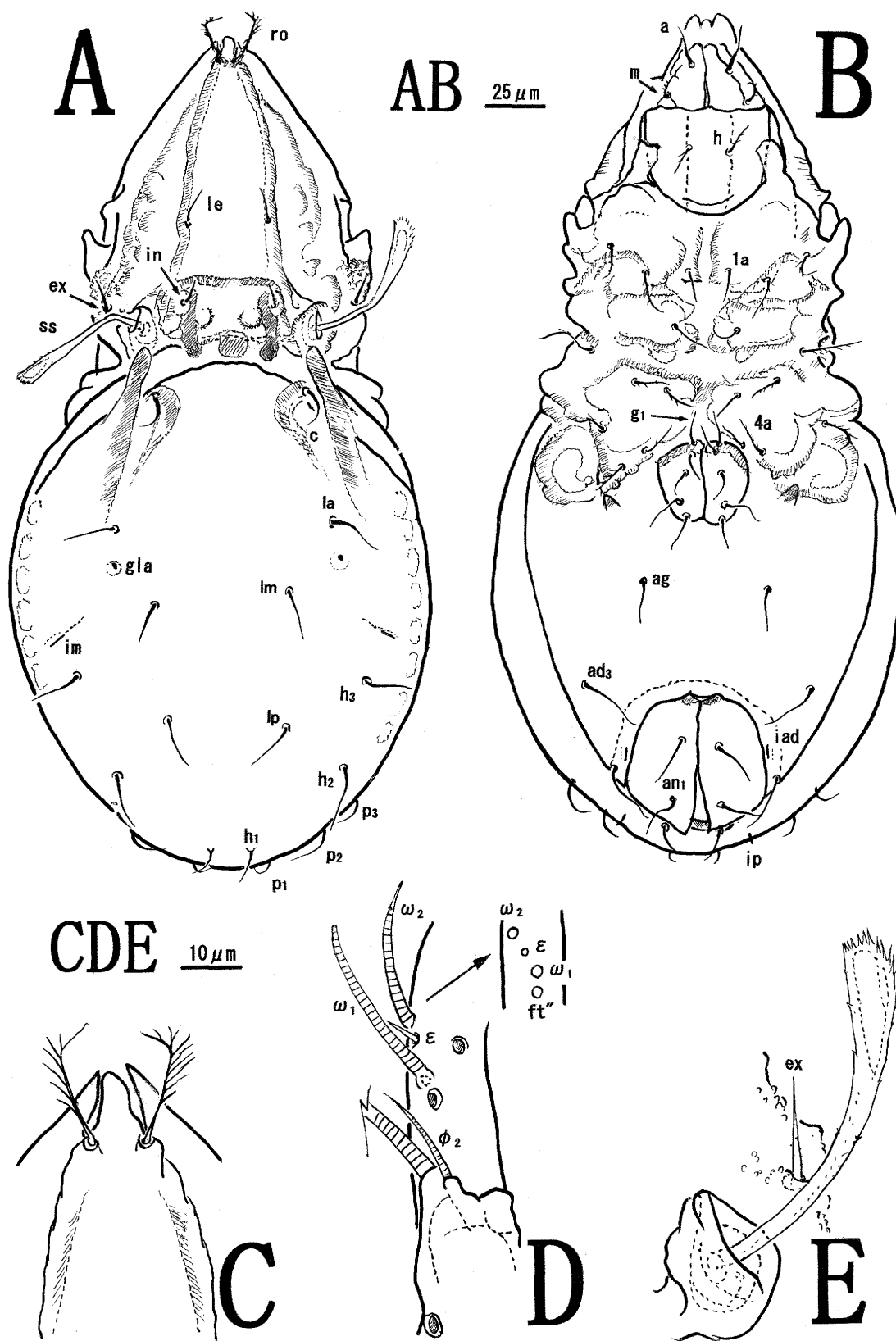
(Fig. 1)

Material examined: Holotype (Female) (NSMT-Ac 12123) from litter, humus and soil material at the garden under no-tillage manner of Nagasato (32° 12' 5" N; 130° 54' 5" E; about 195 m a.s.l.) in Asagiri-cho, Kumamoto Prefecture, June-22-2007, T. Fujikawa; 1 paratype (NSMT-Ac 12124, female): the same data as holotype, but May-13-2007. The type series is deposited in the National Museum of Nature and Science, Tokyo.

Etymology: After the local name of sampling area, Higo.

Measurements and body appearance: Female (n = 2): Body length, 300 μm; width: 164 μm. Body color yellowish-brown. The whole integument smooth, without the postero-lateral margins of propodosoma densely granulate.

Prodorsum: Propodosoma longer than wide. Lateral region outside lamellar ridges with several light areas of weak chitinisation. Rostrum with two incisions; middle part appears to be longer than lateral parts (Fig. 1A), but indeed as long as or shorter after depressed examples (Figs. 1B & C); rostral setae (*ro*) incurved, pectinate unilaterally, inserted on anterior margins at the basal portion of rostral incisions. Lamellar costulae well developed, originating at anterior-lateral margins of bothridia, converging medially to translamellar crest, then extending in parallel in middle part and weakly converging anteriorly toward the insertions of rostral setae. Lamellar (*le*)



Figs. 1. *Triautogneta higoensis* gen. n. sp. n. (Holotype NSMT-Ac 12123 ♀). A, Dorsal view; B, Ventral view; C, Rostral region of a depressed specimen; D, Solenidial region on left tarsus I; E, Right bothridial region. *ro*, *le*, *in*, *ex*: Rostral, lamellar, interlamellar, exobothridial setae, respectively; *ss*: Sensillus; *c*, *la*, *lm*, *lp*, *h*₁₋₃, *p*₁₋₃: Dorsal setae; *gla*: latero-opisthosomatic gland; *im*, *ip*, *iad*: Lyrifissures; *g*₁, *ag*, *an*₁, *ad*₃: Genital, aggenital, anal and adanal setae, respectively; *a*, *m*, *h*: Anterior, medial and posterior subcapitular setae, respectively; *1a*, *4a*: Epimeral setae; *ε*: Famulus on tarsus of leg I; *ω*₁₋₂: Solenidia on tarsus of leg I; *ψ*₂: Solenidion on tibia of leg I; *ft*: Seta of leg.

and interlamellar setae (*in*) indistinctly roughened. Lamellar setae inserted on lamellar ridges, about one-third way along length of lamellar ridges between translamellar crest and rostral setae. Interlamellar region with one pair of distinct longitudinal ridges extending backwards accompanied by, two pairs of rounded excavations; interlamellar setae originating from the anterior pairs. Bothridia opening laterally. Sensilli club-shaped, minutely barbed head. Exobothridial setae indistinctly roughened (Fig. 1E). Relative lengths of prodorsal setae and distances between them: $ss > ro > le \doteq ex > in$; $(ro - le) > (in - in) \geq (le - le) > (le - in) \doteq (in - ex) > (ro - ro)$.

Notogaster: Elliptical in form, with rounded anterior margin bordered by a thick chitinized band, and three kinds of chitinized structures: a circular chitinized structure medially on anterior margin; one pair of long longitudinal ridges extending forward beyond dorsosejugal suture and backward near the insertions of setae *la*; a pairs of curved ridges inside of the longitudinal ridges, bearing setae *c* at the anterior end. Notogastral lateral margin with a peripheral ring of light areas of weak chitinization. Ten pairs of notogastral setae short, simple. Lyrifissure *im* aligned obliquely at the postero-laterally to setae *lm*. Opisthosomal gland-opening situated posterior to *la*. Relative distances between notogastral setae: $(la - la) > (c - c) > (lm - lm) > (lp - lp) > (p_1 - p_1) > (h_1 - h_1)$.

Ventral region: Genital opening small, half as long as interspace between genital and anal openings (Fig. 1B). Anterior margin of genital plates bordered by a thick chitinized band. Genito-anal setae: 5-1-2-3; setae smooth. Genital setae *g*₁ inserted on anterior inner margin of each plate, *g*₂ just posterior to *g*₁, *g*₃ near the mid portion, *g*₄ near lateral margin of plates, and *g*₅ on posterior margin. Lyrifissures *iad* aligned in paraanal position, almost at the level of insertion of anal setae *an*₂. Adanal setae *ad*₁ postanal, *ad*₂ adanal and *ad*₃ preanal; *ad*₂ inserted postero-laterally to *iad*. The relative distances: $(ad_3 - ad_3) > (ad_2 - ad_2) > (ag - ag) > (ad_1 - ad_1)$. Sternal ridge and apodemata distinct. Epimeral setal formula: 3-1-3-3; setae *1a*, *2a* and *4b* smooth; others barbed unilaterally. Diarthric subcapitulum bearing 3 pairs of setae; *a* smooth, proximal half thick; *h* and *m* thin, sparsely barbed unilaterally. Pedipalpal chaetotaxy: 0-2-1-3-9; tarsus with a solenidion coupled to anteroculminal seta. Relative lengths of some of the ventral setae: $ad > m > a > h > g \doteq ag > an$.

Legs: All tarsi monodactyle; claws smooth. Setal formula of legs including famulus but excluding solenidia: I (1-5-2-4-19), II (1-5-2-4-15), III (2-3-1-3-13), IV (1-2-2-3-10). Solenidiotaxy: I (1-2-2), II (1-1-2), III (1-1-0),

IV (0-1-0). Famulus on tarsus I spiniform situated between $\omega_1 I$ and $\omega_2 I$ (Fig. 1D). Solenidion $\omega_1 I$ bacilliform, $\omega_2 I$ setiform, shorter than $\omega_1 I$, inserted on a level anterior to $\omega_1 I$ and famulus. Each of solenidion $\psi_1 I$ and $\psi_2 I$ arising from small apophysis; $\psi_2 I$ inserted postero-laterally contiguous to $\psi_1 I$.

Remarks: The new species differs from *Triautogneta masahitoi* (Aoki, 1963) comb. n. in rostral setae originating near from the basal part of incisions, the presence of translamellar crest and long notogastral ridges, and sensilli with setose, delated head.

Key to the genera of Autognetidae

In the list by Subías (2004), the genus *Ramogneta* was translated from Autognetidae to Machadobelbidae, as pointed out by Balogh and Balogh (1992).

- 1 Rostrum without incisions ----- 2
- Rostrum with incision ----- 3
- 2 Notogaster with 13 pairs of setae ---- *Austrogneta* Bal. and Csis., 1963
- Notogaster with 10 pairs of setae ---- *Eremobodes* Jacot, 1937
- 3 Rostrum with one incision ----- 4
- Rostrum with two incisions ----- *Triautogneta* gen. n.
- 4 Notogaster with cristae ----- *Paraautogneta* Golosova, 1974
- Notogaster without cristae ----- 5
- 5 Lamellar costulae wide, near each other --- *Cosmogneta* Grandjean, 1960
- Lamellar costulae narrow ----- 6
- 6 Propodosoma laterally with granules --- *Autogneta* (*Rhaphigneta*) Grandjean, 1960
- Propodosoma laterally without granules ----- 7
- 7 Sensilli setiform ----- *Conchogneta* Grandjean, 1963
- Sensilli with delated head ----- *Autogneta* Hull, 1916

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摘 要

藤川徳子 (〒 868-0423 熊本県球磨郡あさぎり町 1346

番地の3) : ヒゴミツセンロダニの一新属新種.

ヒゴミツセンロダニ (新称) *Triautogneta higoensis* gen. n., sp. n. を熊本県あさぎり町から採集し記載した. ミツセンロダニ属 (新称) には日本産既知種のうち, マサヒトセンロダニ *A. masahittoi* Aoki, 1963 を新たに編入した.

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